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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,977	08/08/2001	Hideki Masudaya	9281-4147	3139

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Brinks Hofer Gilson & Lione
P.O. Box 10395
Chicago, IL 60610

EXAMINER

LIU, MING HUN

ART UNIT PAPER NUMBER

2675

8

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,977

Applicant(s)

MASUDAYA, HIDEKI

Examiner

Ming-Hun Liu

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US Patent 6,154,201 to Levin et al.

In reference to claim 1, Levin discloses a vehicle-mounted input unit provided with a manual manipulator (figure 1 and column 3 lines 17-25), position sensors (figure 3a, item 76) for supplying position signals corresponding to the direction and quantity in which the many manipulator is driven, actuators (figure 3a, item 70) for providing an external force to the manual manipulator, and a control section for controlling the actuators (column 10, lines 2-4). The control section computes the movable range of the manual manipulator from its current position

to an end of its possible motion according to changes in position signals supplied from the position sensors, and controls the output to the actuators according to the computed width of the movable range (column 10, lines 8-30).

The sections of claim 2-4 with the same preamble as claim 1 are rejected on the same grounds of rejections. In reference to the unique sections of claims 2-4, Levin also explains in column 19, lines 56-60 and column 19, line 66-column 20, line 3, that the control section computes the magnitude of the working force, speed, and acceleration applied to the manual manipulator according to changes in position signals supplied from the position sensors, and controls the output to the actuators according to the computed data.

In reference to claim 5 is rejected on the same grounds as the rejection of claim 1, with the added disclosure of Levin that manual manipulator is used to operate electric devices (column 4, line 20).

Referring to claims 6-10, Levin states that the vehicle-mounted input unit allows for a plurality of tables listing correlations between changes in the position signals and the output of the actuators are stored in the control section (column 20, lines 8-13), and a switching means for the tables is provided on or in the vicinity of the manual manipulator (column 5, lines 66-67).

Response to Arguments

3. Applicant's arguments filed 10-30-2003 have been fully considered but they are not persuasive.

Applicant's arguments concerning claims 1 and 5 on how Levin fails to disclose vary resistance in response width of moveable range is incorrect. Column 11, lines 52-54, Levin clearly teaches that resistance varies on the current range position of the knob.

Applicant's arguments concerning claim 2 on how Levin fails to disclose vary the actuators in response to the magnitude of force is incorrect. On column 21, line 65- column 22, line 10 Levin discloses how the magnitude applied varies the response of the force feedback.

In reference to claims 3 and 4, Levin teaches that "microprocessor reads sensor signals and calculates appropriate forces from those sensor signals ... output appropriate control signals to the actuator... 'haptic accelerator' chips can be provided which are dedicated to calculating, velocity, acceleration" (column 19, line 56 –column 20, line 1). Acceleration values are used to calculate appropriate forces applied to the actuators. These calculated values are used as control values in providing force feedbacks, such as the "damping force sensation can also be provided to knob to slow down the rotation of the knob, allowing more accurate control by the user" (column 10, lines 62-64).

In conclusion, Levin's invention includes all the limitations offered by the applicant. The force feedback on Levin's knob is computer controlled to respond to the range of motion, magnitude of force and rate of acceleration. The spirit behind these inventions is the same, allowing users to sense physical cues that can be felt by the hand and fingers and with the programmable micro processing control (column 17, lines 32-39) offered by Levin, the force feedback can be easily controlled.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on 703-305-9720. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Ming-Hun Liu


DENNIS-DOON CHOW
PRIMARY EXAMINER